



State of Idaho
Department of Environmental Quality
Air Quality Division

**AIR QUALITY PERMIT
STATEMENT OF BASIS**

Tier II Operating Permit and Permit to Construct No. T2-2008.0109

Proposed for Public Comment

Basic American Foods

Rexburg, Idaho

Facility ID No. 065-00008

August 13, 2008

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Permit Writer

The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01. et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

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Acronyms, Units, and Chemical Nomenclature

| | |
|--------------------------|--|
| AFS | AIRS Facility Subsystem |
| AIRS | Aerometric Information Retrieval System |
| AQCR | Air Quality Control Region |
| CAA | Clean Air Act |
| CFR | Code of Federal Regulations |
| CO | carbon monoxide |
| DEQ | Department of Environmental Quality |
| dscf | dry standard cubic feet |
| EPA | U.S. Environmental Protection Agency |
| HAP | Hazardous Air Pollutant |
| IDAPA | a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act |
| lb/hr | pounds per hour |
| m | meter(s) |
| MACT | Maximum Achievable Control Technology |
| $\mu\text{g}/\text{m}^3$ | micrograms per cubic meter |
| MMBtu | million British thermal units |
| NESHAP | National Emission Standards for Hazardous Air Pollutants |
| NO_2 | nitrogen dioxide |
| NO_x | nitrogen oxides |
| NSPS | New Source Performance Standards |
| PC | permit condition |
| PM | particulate matter |
| PM_{10} | particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers |
| ppm | parts per million |
| PSD | Prevention of Significant Deterioration |
| PTC | permit to construct |
| PTE | potential to emit |
| Rules | Rules for the Control of Air Pollution in Idaho |
| SIC | Standard Industrial Classification |
| SIP | State Implementation Plan |
| SM | Synthetic Minor |
| SO_2 | sulfur dioxide |
| SO_x | sulfur oxides |
| TAP | Toxic Air Pollutant |
| T2 | Tier II operating permit |
| T2/PTC | Tier II operating permit and permit to construct |
| T/yr | tons per year |
| VOC | volatile organic compound |

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| Permittee: | Basic American Foods | Permit No. | T2-2008.0109 |
| Location: | Rexburg, Idaho | Facility ID No. | 065-00008 |

1. FACILITY INFORMATION

1.1 Facility Description

The Basic American Foods (BAF) Rexburg facility produces a variety of dehydrated food products for both internal use and for external customers. Products include potato granules, formulated dehydrated food products, dehydrated whole and piece food products, and animal feed. BAF uses a variety of dehydration technologies to produce products to meet exacting customer specifications. The main sources of air emissions include boilers, dryers, dehydration lines, pneumatic material transfer and packaging operations.

1.2 Permitting Action and Facility Permitting History

Tier II Operating Permit and Permit to Construct

This T2/PTC is a revision of an existing permit. Permit status is noted as active and in effect (A) or superseded (S).

| | |
|-------------------|--|
| July 30, 1980 | PTC Letter (no number assigned) for the Kipper boiler issued, Permit status (S) |
| April 30, 1981 | PTC Letter was amended to revise test dates, Permit status (S) |
| May 8, 1984 | PTC Letter was amended to clarify coal/wood input limits, Permit status (S) |
| December 11, 2002 | Initial Tier I Operating Permit No. 065-00008 issued, Permit status (S) |
| April 16, 2008 | T1-060513, Tier I Operating Permit Renewal, Permit status (S) |
| June 10, 2008 | T2-030515, Facility-wide Tier Operating Permit and Permit to Construct, Permit status (A) |
| June 10, 2008 | T1-2008.0053, Tier I Operating Permit Modification – Incorporate Tier II Operating Permit No. T2-030515, Permit status (A) |

2. APPLICATION SCOPE AND APPLICATION CHRONOLOGY

2.1 Application Scope

Basic American Foods (BAF) is requesting a modification to permits T2-030515 and T1-2008.0053 to revise the pressure drop range for the Kipper boiler multiclone. BAF has requested that the upper end of the multiclone pressure drop range in the permit be increased by one inch of water.

BAF will be refurbishing the multiclone during July 2008 which will include replacing both tube sheets, outlet tubes, vanes, collecting tubes, and gaskets. BAF's multiclone originally came with Spirocones, which are energy saving devices that reduce the pressure drop across the multiclones without affecting the particulate capture efficiency. The manufacturer no longer makes Spirocones for the 12V size multiclones, which BAF has, due to a variety of issues. See the application materials and the letter from Mr. Stephen Chiama of Babcock and Wilcox Power Generation Group. Mr. Chiama recommends the Spirocones are left out of the multiclone during the refurbishing process. This will have the effect of

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increasing the pressure drop across the multiclones by approximately one inch of water column with no loss of particle removal efficiency.

Mr. Chiama states:

In the specific case involving the Basic American Foods installation at Rexburg, ID; the multiclone provided with Joy Job No. 81-120-06 was sized for 48,314 ACFM at 435°F. For this installation in new condition, we originally predicted a pressure drop of 1.85" VWC (vertical water column) with Spirocones installed. For the same design conditions, in as-new condition without Spirocones, we would predict that model and size multiclone to have pressure drop approximately 1" VWC higher than with Spirocones installed.

Operating the unit without Spirocones should not reduce the collection efficiency of the multiclone dust collector significantly enough to measure in practical situations.

In addition, BAF has requested some amendments to the permit that were identified during the permit handoff meeting held on July 31, 2008. A letter with requested amendments was received August 12, 2008. The amendments include:

- Clarifying in Permit Conditions 5.7, 5.8, and 6.7 that performance tests are required to be conducted within 180 days of June 10, 2008 (rather than within 180 days of permit issuance, since the permit is being modified).
- Clarifying in Permit Condition 8.2 that CO emissions calculations are "...based on steam production and coal consumption...". It appears the word "production" was omitted from the sentence.
- Changing the CO emissions reporting schedule in Permit Condition 8.4.1 from July 1st through June 30th to January 1st through December 31st.

2.2 Application Chronology

| | |
|-----------------|--|
| July 8, 2008 | Application received at DEQ. |
| July 18, 2008 | DEQ determined the application complete. |
| August 12, 2008 | DEQ received a letter from BAF requesting additional amendments. |

3. TECHNICAL ANALYSIS

Based on the information provided by the multiclone manufacturer, there is no expected change in particulate control efficiency or associated emissions as a result of removing the Spirocones.

3.1 Kipper and Sons Boiler with multiclone and wet scrubber control devices

Table 3.1 KIPPER BOILER INFORMATION

| Emissions Unit Description | Control Device Description |
|--|---|
| Kipper and Sons Boiler 65,000 pound per hour steam production | Zurn multiclone Riley Ventri-rod® scrubber |

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3.2 Emissions Inventory

The emissions inventory is not expected to change as a result of this permit modification. See the statement of basis for T2-030515 for a current emissions inventory.

3.3 Ambient Air Quality Impact Analysis

Because emissions are not changing, an ambient air quality impact analysis is not required for this modification. See the statement of basis for T2-030515 for the current air quality impact analysis.

4. REGULATORY REVIEW

4.1 Attainment Designation (40 CFR 81.313)

The facility is located within AQCR 61, UTM zone 12 and Madison County. The area is designated as attainment or unclassifiable for PM₁₀, PM_{2.5}, CO, NO₂, SO_x, and Ozone. Reference 40 CFR 81.313.

The SIC is 2034, which represents establishments primarily engaged in artificially dehydrating fruits and vegetables, including “potato flakes, granules, and other dehydrated potato products.”

4.2 Permit to Construct (IDAPA 58.01.01.201), and Tier II Operating Permit (IDAPA 58.01.01.401)

BAF recently obtained a facility-wide Permit to Construct and Tier II Operating Permit (T2-030515) for the Rexburg facility. This permit modification consists of revising the allowable multiclone pressure drop range in Table 3.2 of the permit, Compliance Assurance Monitoring Requirements for Kipper Boiler.

4.3 Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)

The Rexburg facility is a major facility for purposes of the Title V program as defined under IDAPA 58.01.01.008.10 because the actual or potential emissions of several criteria pollutants exceed 100 tons per year. The AIRS classification is “A.”

4.4 PSD Classification (40 CFR 52.21)

The Rexburg facility is not a major facility for purposes of the PSD/NSR program as defined under IDAPA 58.01.01.205.01 (40 CFR 52.21(b)(1)) because it does not have the potential to emit a regulated criteria air pollutant in amounts greater than or equal to 250 tons per year. The facility is not a “designated facility” according to the definitions in IDAPA 58.01.01.006.30. The Rexburg facility does contain fossil-fuel boilers, but the total potential fossil-fuel Btu input is less than 250 MMBtu per hour. The two natural gas boilers have a total Btu input of 87 MMBtu/hr and the Kipper boiler is allowed to burn up to 50% heat input on coal, which is 45 MMBtu per hour, for a total fossil-fuel input of 132 MMBtu/hr. Facility-wide CO emissions are limited to 249 tons per year.

4.5 NSPS Applicability (40 CFR 60), NESHAP Applicability (40 CFR 61), MACT Applicability (40 CFR 63)

The NSPS, NESHAP, and MACT applicability is discussed in the statement of basis for T2-030515.

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4.6 CAM Applicability (40 CFR 64)

The Kipper boiler is a CAM affected source and the multiclone pressure drop range is a compliance indicator.

4.7 Permit Conditions Review

This section describes the permit conditions for this initial permit or only those permit conditions that have been added, revised, modified or deleted as a result of this permitting action.

The primary change made to the permit is to modify the multiclone pressure drop indicator range contained in Table 3.2 of the permit, Compliance Assurance Monitoring Requirements for the Kipper Boiler. The indicator range was changed from 1.0 – 5.0 inches of water to 1.0 – 6.0 inches of water.

In addition, BAF has requested some amendments to the permit that were identified during the permit handoff meeting held on July 31, 2008. A letter with requested amendments was received August 12, 2008. The amendments include:

- Clarifying in Permit Conditions 5.7, 5.8, and 6.7 that performance tests are required to be conducted within 180 days of June 10, 2008 (rather than within 180 days of permit issuance, since the permit is being modified).
- Clarifying in Permit Condition 8.2 that CO emissions calculations are “...based on steam production and coal consumption...” It appears the word “production” was omitted from the sentence in the previous permit.
- Changing the CO emissions reporting schedule in Permit Condition 8.4.1 from July 1st through June 30th to January 1st through December 31st.

5. PERMIT FEES

A Tier II operating permit processing fee is not required in accordance with IDAPA 58.01.01.407.02. Fees for the Tier I Operating Permit modification will be charged in accordance with IDAPA 58.01.01.390.02.

6. PUBLIC COMMENT

The permit is being made available for public comment.

Appendix A – AIRS Information

AIRS/AFS^a FACILITY-WIDE CLASSIFICATION^b DATA ENTRY FORM

Facility Name: Basic American Foods

Facility Location: Rexburg

AIRS Number: 065-00008

| AIR PROGRAM POLLUTANT | SIP | PSD | NSPS (Part 60) | NESHAP (Part 61) | MACT (Part 63) | SM80 | TITLE V | AREA CLASSIFICATION A-Attainment U-Unclassified N- Nonattainment |
|--------------------------|-----|-----|--------------------|---------------------|-------------------|------|---------|---|
| SO ₂ | A | B | | | | | A | U |
| NO _x | A | B | | | | | A | U |
| CO | A | SM | | | | | A | U |
| PM ₁₀ | A | B | | | | | A | U |
| PT (Particulate) | A | B | | | | | | |
| VOC | B | B | | | | | B | U |
| THAP (Total HAPs) | B | ND | | | | | B | |
| | | | APPLICABLE SUBPART | | | | | |
| | | | | | | | | |

^a Aerometric Information Retrieval System (AIRS) Facility Subsystem (AFS)

^b AIRS/AFS Classification Codes:

- A = Actual or potential emissions of a pollutant are above the applicable major source threshold. For HAPs only, class “A” is applied to each pollutant which is at or above the 10 T/yr threshold, **or** each pollutant that is below the 10 T/yr threshold, but contributes to a plant total in excess of 25 T/yr of all HAPs.
- SM = Potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable regulations or limitations.
- B = Actual and potential emissions below all applicable major source thresholds.
- C = Class is unknown.
- ND = Major source thresholds are not defined (e.g., radionuclides).